

# The Role of Caveolin-1 in 5-Hydroxytryptamine Receptors Mediated Epidermal Growth Factor Receptor Transactivation In Vascular Smooth Muscle

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Description

5-Hydroxytryptamine (5-HT) receptors have numerous functions in vascular and central nervous system. We have previously shown that 5-HT mediated EGF (epidermal growth factor) receptor transactivation contributes to vascular contractility. In this study, we investigated the roles of caveolin-1 in 5-HT receptor mediated EGFR transactivation and contraction. We evaluated EGFR transactivation and contractile responses produced by 5-HT in  $\beta$ -cyclodextrin ( $\beta$ -CD) treated and untreated rat aorta. 5-HT, selective 5HT<sub>2A</sub>receptor agonist  $\alpha$ -Methyl-5HT and selective 5HT<sub>1B/D</sub> receptor agonist sumatriptan stimulated EGFR phosphorylation (pEGFR) were also examine in caveolin-1 siRNA (si-Cav-1) transfected A7R5 vascular smooth muscle cell lines.  $\beta$ -CD treatment or AG1478 decreased maximal contractile responses of 5-HT and 5-HT mediated EGFR phosphorylation in rat aorta and A7R5 cell lines. Furthermore, 5 ...

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